

FACTORING

$$\boxed{x+a}(x+b)=0$$

$$x = \quad x =$$

$a \cdot b = \text{last \#}$
 $a + b = \text{middle \#}$

- ① make = 0
- ② factor
- ③ solve ()

SQUARE ROOTS

$$\pm \sqrt{y} = \sqrt{(x+r)^2}$$

- ① get $(x+r)^2$ alone
- ② $\sqrt{\quad} < 2$ answers
- ③ solve for x

QUADRATIC FORMULA

FORMULA

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

*has to be 2a

- ① find a, b, c
- ② plug in a, b, c
- ③ simplify

*ALWAYS WORKS

$$x^2 - 10x + 21 = 0$$

$$\begin{array}{r} 21 \\ 7 \overline{) 3710} \\ -7 \overline{) 37} \end{array}$$

$$(x-7)(x-3)=0$$

$$x-7=0$$

$$x-3=0$$

$$x=7$$

$$x=3$$

$$\sqrt{(x+7)^2} = \sqrt{36}$$

original: $(x+7)^2 = 36$

$$x+7=6$$

$$x+7=-6$$

$$x=-1$$

$$x=-13$$

$$x^2 - 10x + 21 = 0$$

$$x^2 - 10x + 21 = 0$$

$$x = \frac{10 \pm \sqrt{(-10)^2 - 4(1)(21)}}{2}$$

$$x = \frac{10 \pm \sqrt{100 - 84}}{2}$$

rounding
round it.

$$x = \frac{10 \pm \sqrt{16}}{2}$$

Solving

Quadratic

Equation

$$y = ax^2 + bx + c$$